Kuppameni: A Potent Herbal Boon for Undernourished Malaysian Indian Plantation Workers

Thanaseelen Rajasakran, Santhidran Sinnappan and Sivachandralingam Sundara Raja

1,2Department of Mass Communication, Universiti Tunku Abdul Rahman, Petaling Jaya 46200, Malaysia
3Department of History, Universiti Malaya, Kuala Lumpur 50603, Malaysia
E-mail: 1<thanak@utar.edu.my>, 2<santhidran@utar.edu.my>, 3<siva@um.edu.my>

KEYWORDS Herbal Benefit, Plant Extract, Tropical, Nutrient, Alternative Drug

ABSTRACT Malaysian Indian plantation workers are economically deprived and suffer from malnutrition. This can be altered by consuming medicinal and nutritional herbs found aplenty in tropical Malaysia. The herb *acalypha indica linn*, or Indian nettle, which has high antioxidants, is of particular interest for Indian estate workers. Antioxidants in the plant help retard toxic free radicals found in the body. Considered an indigenous form of healthcare, consuming this plant on a regular basis has the potential to rejuvenate the health of the under-nourished Indian plantation worker.

INTRODUCTION

The Benefits of Plant Nutrients

Many indigenous cultures use wild plants and herbs on a daily basis for health purposes. However, as Zaika (1975) noted that since the late 19th century many scientific experiments have been carried out to document the antimicrobial (agents which can reduce illness and death from infectious diseases) properties of plants. In fact, the use of these medicinal herbs is becoming increasingly popular in as much as they are free from side-effects often caused by synthetic medicines or drugs.

Globally more than 35,000 plant species have been reported to be used for medicinal purposes (Lewington 1993). In India alone over 6,000 medicinal plants have been found and used in traditional folk medicine – of which about 3,000 are officially recognized (Jagatheeswari et al. 2013).

Unsurprisingly, tropical rain forests plants are biologically and chemically diverse because of their natural defense mechanisms for retarding pests, disease and predators (Jantan 2004). Consequently, tropical medicinal plants are an important source of natural chemicals and medicine. Elliot (1986) noted that about 25 percent of modern drugs have their origins in medicinal plants found in tropical rainforests.

Address for correspondence:
Dr. Thanaseelen Rajasakran
Department of Mass Communication
Universiti Tunku Abdul Rahman
Abdul Rahman, Petaling Jaya
46200, Malaysia
E-mail: thanak@utar.edu.my

Tropical Malaysia is home to many plants that have the potential of being used for medicinal purposes. For instance, Latiff et al. (1984) observed that almost 16 percent of over 10,000 species of plants found in Malaysia could be used for medicinal purposes. This numbers could be higher because native uses of many plants remain undocumented, and moreover, most knowledge about these plants is passed on orally from generation to generation (Jantan 2004).

In addition, Jantan (2004) notes in most tropical countries there is little systematic research for exploiting the medicinal properties of tropical plants. Besides, most effort is focused on clearing forests for timber or oil palm for commercial purposes (Jantan 2004). In fact, Arthur (1954) was the first to publish a survey of native Borneo plants, and his work subsequently stimulated some research in Malaysia. However, much of the research has been limited to universities and research institutions, mainly funded by the government, with little funding from the private sector and multinationals (Jantan 2004).

In view of this difficulty, the present study’s authors proposed that there is no need to invest inefficient effort in discovering how to derive potential drugs from these plants, but instead harness the knowledge pertaining to the nutritional benefits contained in some of these tropical plants --thereby promoting it for the general well-being of under-nourished individuals in many parts of Malaysia. This study focuses on the poor Malaysian Indian estate workers, and how they can benefit from consuming the scientifically known *acalypha indica linn* for better health.
ACALYPHA INDICA LINN DEFINED

This plant is found commonly in India, Sri Lanka, and Africa, as well as in Southeast Asia (Sanseera et al. 2012). Commonly known as the Indian nettle or three-seeded mercury, this herb has different names in various countries; in Indonesia it is known as lelatang, in China tie xian, and in India kuppikokli in Hindi and haritamanjari in Sanskrit (Globeimmed 2012). In Malaysia, as in India, this herb is found amidst fields and waste places throughout the country, hence its name kuppameni (pearl in the waste) among the Indian community in Malaysia. It is also known as galak kuching (Azmahani et al. 2002) in Malaysia. This herb plant is considered a troublesome perennial weed which can grow to a height of 1 metre (Sanseera et al. 2012).

Research suggested that this traditional herb is used to treat scabies (Gurib-Fakim et al. 1993), arthritis and relief of ulcer pains (Dhar et al. 1968), healing of wounds (Reddy et al. 2002), as a purgative (Panthong et al. 1991), snake bite anti-venom (for example, Siddiqui and Husain 1990; Samya et al. 2008), and as poultice, with lime or oil (Govindarajan et al. 2008). In India this plant is highly regarded in traditional Tamil siddha (traditional) medicine, as it is said to rejuvenate the body because of its anti-oxidant properties (Govindarajan et al. 2008). The traditional siddhas prepare a concoction for medicinal use. This herb is also extensively used from Asia to the Polynesia in traditional medicine (Burkill 1985).

A recent study by Sanseera et al. (2012) suggested that this troublesome weed contains a rich source of antioxidant that is helpful in rejuvenating the body. Benefits of antioxidants first surfaced in the 1990s, when researchers found evidence on the role of free radicals in aging, vision loss and cancer (Valiko et al. 2006; Sifferlin 2013). Free radicals are a natural byproduct of the body’s metabolism because body cells need oxygen to breakdown food for energy, which in turn can cause cell damage. The availability of antioxidants helps minimize cell damage (Sifferlin 2013).

BENEFITING MALAYSIAN INDIAN PLANTATION WORKERS

The Indian diaspora in Malaysia began in the 19th century when the British colonial government wanted to commercialize the rubber plantation resources in the country, and Indians, mostly from South India, were employed in these plantations (Gopal et al. 2006). Later these plantations began to include oil palm. Oorjitham (2001) and O’Holohan (1994) observed that many Indians plantation laborers were and continued to be economically exploited, denied basic amenities, and many die in conditions of abject poverty and malnutrition. Estate children were the worst in physical development as compared generally to children of urban disadvantaged and rural sectors (Singh 1992). Chee et al. (1992, see also Chandrasekharan and Marimuthu 1980) reported that important nutrients such as thiamin, riboflavin and niacin intake were found low amongst these workers (Chee et al. 1996). There is high prevalence of protein-energy malnutrition, anemia, worm infestations and vitamin deficiencies in the estate communities (Kandiah and Lim 1977; Sinniah et al. 1992). Chee et al. (1996) suggested that vegetables were consumed once a week by the Indian workers by only 38 percent of Indian workers because they are expensive for daily consumption.

Ironically, Chee et al. (1996) had found low alcohol consumption among Indian plantation workers; this phenomenon seemed to be unusual among lower income estate workers. Besides, the researchers also observed that perhaps alcohol consumption may have been under reported because of the social stigma attached to it among lower-income Indians. Chee et al. (1996) stated that consuming alcohol does contribute to excess energy wastage from the body.

Having a high consumption of alcohol and low level of healthy diet, researchers suggested that Indian plantation workers should be educated on the use of the widely available acalypha indica linn herb for improving their health. Although, Malaysian scientists have not fully explored the medicinal and nutritional use of this herb, the researchers suggested that this herb may provide a cost effective approach to improving the nutrition of our under-nourished plantation workers. As noted by Walter (n.d), when its leaves are consumed in moderate quantities, it helps to rid the body of diseases, resulting in good health. He suggested frying the leaves with castor oil consumed over a 45 day period, resulting in a good measure to restore the health of workers who drink.

CONCLUSION

Extant studies have suggested the Indian nettle has been widely used in sitha (traditional medicine) practices. The researchers suggested
that the Malaysian Indian plantation workers be
given knowledge to consume this widely avail-
able herbal plant on a regular basis to improve
their health conditions. However, further labora-
tory tests and clinical studies are needed to
better ascertain the herb’s potential nutritional
qualities.

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